Sounds

Sounds should reinforce the classic and pragmatic feel of Josephine, staying away from "silly" or "goofy" sounds. They should provide a high quality premium feeling. Clear & crisp ringtones that are reassuring and that inspire a light feeling of no clutter. They should be melodic, happy, elegant & uncomplicated. The sounds should also have a functional focus rather than being music tones.

Families of sounds should be produced in addition to stand alone ringtones. The sounds in each family should have a clear relationship. Each sound family should consist of the following different sounds:

> 1 Ringtone voice call
> 1 Ringtone video call
> 1 Ringtone data/fax call
> 1 Alarm clock signal
> 1 Calendar alert
> 1 SMS alert
> 1 Voicemail alert
> 1 E-mail alert

- **Ringtones** should be able to penetrate a noisy environment. For that reason, the ring tone must have significant changes in pitch, melody and volume, while playing. The ring tone must contain a lot of information in the most sensitive frequency region of the human ear (typically around 2.5 kHz). But the variation of pitch and volume is of most importance to get attention from the ring tone. A clear sounding melody with high pitch and volume is easy for the human brain to detect in a noisy environment. A staccato melody is also easier to detect in comparison to a gliding melody with a lot of legato or "portamento". After you have memorized the melody it is even easier to hear it through noise. A "groovy beat" with no particular melody might sound "cool", but it is harder to detect through environmental noise.

- **Alarm sounds** main objective is to wake up the user. The user should wake up as soft as possible, the alarm sounds for 60 seconds and is not time critical for the user. The sound should be built up and be relatively calm the first 5-10 seconds and be more and more intrusive to reach a climax at 30s. Thus the alarm sound needs to be pretty long to minimize the number of loops. Note that the alarm is played with an increasing volume so the volume of the sound should be constant